



DTC114T

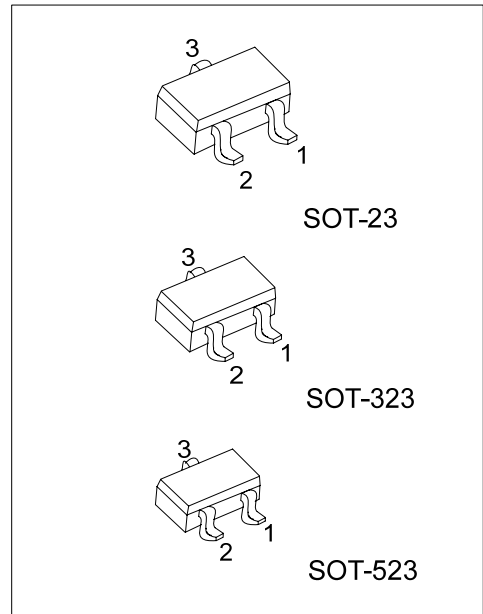
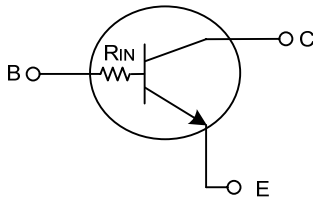
NPN SILICON TRANSISTOR

NPN DIGITAL TRANSISTOR (BUILT-IN BIAS RESISTORS)

FEATURES

- * Built-in bias resistors that implies easy ON/OFF applications.
- * The bias resistors are thin-film resistors with complete isolation to allow negative input.

EQUIVALENT CIRCUIT



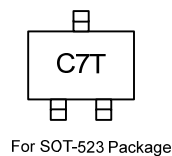
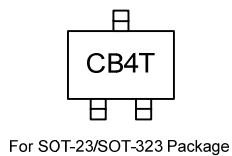
*Pb-free plating product number:DTC114TL

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
DTC114T-AE3-6-R	DTC114TL-AE3-6-R	SOT-23	E	B	C	Tape Reel
DTD114T-AL3-6-R	DTD114TL-AL3-6-R	SOT-323	E	B	C	Tape Reel
DTC114T-AN3-6-R	DTC114TL-AN3-6-R	SOT-523	E	B	C	Tape Reel

<p>DTC114TL-AE3-6-R</p> <p>(1)Packing Type (2)Pin Assignment (3)Package Type (4)Lead Plating</p>	<p>(1) R: Tape Reel (2) refer to Pin Assignment (3) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523 (4) L: Lead Free Plating, Blank: Pb/Sn</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	50	V
Collector-Emitter Voltage		V_{CEO}	50	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	100	mA
Collector Power Dissipation	SOT-23/SOT-323	P_C	200	mW
	SOT-523		150	mW
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

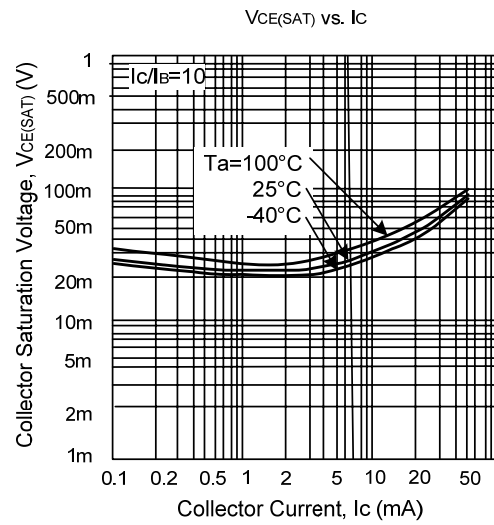
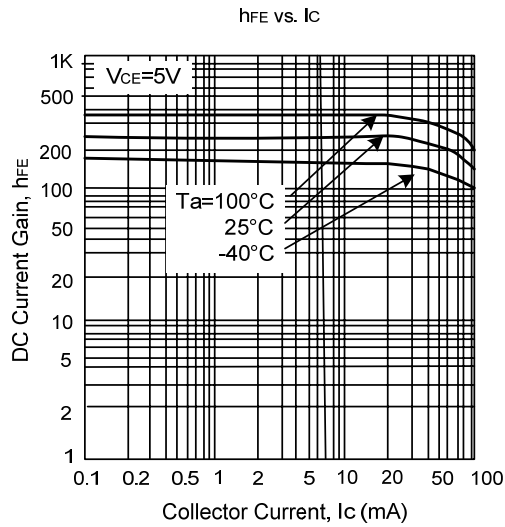
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=50\mu A$	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA$	50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=50\mu A$	5			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10mA, I_B=1mA$			0.3	V
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V$			0.5	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=4V$			0.5	μA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=1mA$	100	300	600	
Input Resistance	R_{IN}		7	10	13	k Ω
Current Gain Bandwidth Product	f_T	$V_{CE}=10V, I_E=-5mA, f=100MHz$		250		MHz

TYPICAL CHARACTERISTICS



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